## *Amendments to the Claims*

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (currently amended) A method for determining the effect of a substance on sequestration, uptake or accumulation of amyloid in brain cells, said method comprising:

(A) exposing brain cells to an integrin antagonist, wherein said antagonist is selected from the group consisting of function blocking anti-α5 subunit integrin antibody, function blocking anti-β1 subunit integrin antibody, an RGD peptide capable of modifying integrin adhesion, RGDS peptide, GRGDS peptide, GRGDSP peptide, GRGDTP peptide and echistatin,

(B) maintaining said cells for a time sufficient to induce sequestration, uptake or accumulation of amyloid in said cells as a result of said antagonist,

(C ) adding said substance before, during and/or after said exposing or maintaining; and

(D) determining whether the presence of said substance has an effect on said antagonist induced sequestration, uptake or accumulation of amyloid.

2. (canceled)

3. (previously presented) The method of claim 1, wherein sequestration, uptake or accumulation of amyloid increases.

4. (original) The method of claim 3, wherein said increase is at least about 10% compared to a control.

5. (previously presented) The method of claim 1, wherein at least one of said sequestration, uptake or accumulation of amyloid decreases.

6. (original) The method of claim 5, wherein said decrease is at least about 10% compared to a control.

7. (original) The method of claim 1, wherein the brain cells are in the form of a brain slice.

8. (original) The method of claim 7, wherein the brain slice is a hippocampal slice, an entorhinal cortex slice, an entorhinohippocampal slice, a neocortex slice, a hypothalamic slice, or a cortex slice.

9. (withdrawn) The method of claim 1 wherein said brain cells are *in vivo*.

10. (withdrawn) The method of claim 1, wherein the brain cells are from a non-human transgenic animal.

11. (withdrawn) The method of claim 10, wherein said non-human transgenic animal comprises a human apolipoprotein E4 gene.

12. (withdrawn) The method of claim 10 wherein both alleles of an endogenous apolipoprotein E gene of the non-human transgenic animal are ablated.

13. (canceled)

14. (previously presented) The method of claim 1, wherein said antagonist is said function blocking anti-α5 subunit integrin antibody or said function blocking anti-β1 subunit integrin antibody.

15. (previously presented) The method of claim 1, wherein said antagonist is said RGD peptide, RGDS peptide, GRGDS peptide, GRGDTP peptide, GRGDSP peptide or echistatin.

16. (previously presented) The method of claim 1, wherein the amount of sequestration of amyloid, accumulation of amyloid, or uptake of amyloid, is determined visually.

17. (previously presented) The method of claim 1, wherein the amount of sequestration of amyloid, accumulation of amyloid, or uptake of amyloid is measured using a capture reagent.

18. (previously presented) The method of claim 16, wherein the capture reagent is an antibody that binds to amyloid.

19. (previously presented) The method of claim 1 wherein said cells are apolipoprotein E deficient brain cells or apolipoprotein E4 containing brain cells cultured in a medium which selectively increases sequestration of and/or accumulation of and/or uptake of amyloid, and/or lysosomal dysfunction, and/or microglia activation in the brain cells, wherein the brain cells comprise an increased amount of sequestration of and/or accumulation of and/or uptake of amyloid, and/or lysosomal dysfunction, and/or microglia activation compared to a control.

20 - 35. (canceled)

36. (previously presented) The method of claim 1 wherein said substance is added prior to exposing said brain cells to said antagonist.

37. (previously presented) The method of claim 1, wherein said substance is added to said brain cells simultaneously with said antagonist.

38. - 58. (canceled)

59. (currently amended) A method for determining whether a substance is capable of inhibiting sequestration, uptake or accumulation of amyloid in brain cells, said method comprising:

(A) exposing brain cells to an integrin antagonist, wherein said antagonist is selected from the group consisting of function blocking anti-α5 subunit integrin antibody, function blocking anti-β1 subunit integrin antibody, an RGD peptide capable of modifying integrin adhesion, RGDS peptide, GRGDS peptide, GRGDSP peptide, GRGDTP peptide and echistatin,

(B) maintaining said cells for a time sufficient to induce sequestration, uptake or accumulation of amyloid one or more characteristics of a neurodegenerative disease in said cells as a result of said antagonist,

(C ) adding said substance before, during and/or after said exposing or maintaining; and

(D) determining whether the presence of said substance inhibits one or more of said characteristics sequestration, uptake or accumulation of amyloid in said cells.

60. canceled.

61. (previously presented) The method of claim 59, wherein at least one of said sequestration, uptake or accumulation of amyloid decreases.

62. (original) The method of claim 61, wherein said decrease is at least about 10% compared to a control.

63. (previously presented) The method of claim 59, wherein the brain cells are in the form of a brain slice.

64. (original) The method of claim 63, wherein the brain slice is a hippocampal slice, an entorhinal cortex slice, an entorhinohippocampal slice, a neocortex slice, a hypothalamic slice, or a cortex slice.

65. (withdrawn) The method of claim 59 wherein said brain cells are *in vivo*.

66. (withdrawn) The method of claim 59, wherein the brain cells are from a non-human transgenic animal.

67. (withdrawn) The method of claim 66, wherein said non-human transgenic animal comprises a human apolipoprotein E4 gene.

68. (withdrawn) The method of claim 67 wherein both alleles of an endogenous apolipoprotein E gene of the non-human transgenic animal are ablated.

69. canceled.

70. (previously presented) The method of claim 59, wherein said antagonist is said function blocking anti-α5 subunit integrin antibody or said function blocking anti-β1 subunit integrin antibody.

71. (previously presented) The method of claim 59, wherein said antagonist is said RGD peptide, RGDS peptide, GRGDS peptide, GRGDTP peptide, GRGDSP peptide or echistatin.

72. (previously presented) The method of claim 59, wherein the amount of sequestration of amyloid, accumulation of amyloid, or uptake of amyloid is determined visually.

73. (previously presented) The method of claim 59, wherein the amount of sequestration of amyloid, accumulation of amyloid, or uptake of amyloid is measured using a capture reagent.

74. (previously presented) The method of claim 73, wherein the capture reagent is an antibody that binds to amyloid.

75. (original) The method of claim 59 wherein said cells are apolipoprotein E deficient brain cells or apolipoprotein E4 containing brain cells.

76. - 79. canceled.